



Alloway Township School

Home of the Tigers

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Grade 4 Unit 5— Dates: 3/24/25 - 5/1/25

Rationale for Unit 5 Expectations

In this final unit, learners build, draw, and analyze two-dimensional shapes to deepen their understanding of properties of two-dimensional objects and the use of them to solve problems involving symmetry. They identify key parts of figures such as parallel lines, perpendicular lines, points, line segments, and right angles. Learners recognize angles as geometric shapes formed by two rays, understand concepts of angle measurement, and measure angles using protractors. They sketch angles and use the understanding that angle measure is additive to create and solve equations to find unknown angle measures.

Unit 5 Description & Expectations

Days of Instruction: 23 days

- 2 days are accounted for Spiral Review

Unit Completion Date: 5/1

Unit Topics/Themes: (Themes are listed in the TG Table of Contents)

[Topic: Points, Lines, Rays, and Angles](#) (Lesson 30)

[Topic: Angles](#) (Lesson 31)

[Topic: Add and Subtract Angles](#) (Lesson 32)

[Topic: Classify Two-Dimensional Figures](#) (Lesson 33)

[Topic: Symmetry](#) (Lesson 34)

[Topic: Math in Action: Classify Shapes and Angles](#) (Math in Action)

Whole Group Instruction	Differentiation: Teacher Table	Differentiation: Independent Practice/Small Group Center
Guidelines		
30-45 minutes of daily instruction using Core Resources	30-45 minutes of daily differentiation	
<p>Number Sense Making Routines: (5-10 minutes daily) Number sense is built through experiences. Vary your sense making routines based on the needs of your classroom. They may be a whole group activity, but they also may be done as a small group depending upon the need. Example areas of focus: Verbal Counting, Object Counting, Cardinality, Subitizing, Spatial Relationships, One/Two More & Less, Benchmark Numbers, Part-Part-Whole, Magnitude, etc.</p> <p>Core Resource for Whole Group Instruction: Ready Classroom Math (30-45 minutes daily)</p> <p>Ready Classroom Math design & expectations:</p> <ul style="list-style-type: none"> ● Understand Lessons - Focus on developing conceptual understanding and help students connect new concepts to familiar ones as they learn new skills and strategies. ● Strategy Lessons - Focus on helping students persevere in solving problems, discuss solution strategies, and compare multiple representations through the <i>Try-Discuss-Connect</i> routine. Strategy Lessons are taught over multiple days (usually 3-5 days) and consist of different sessions. <ul style="list-style-type: none"> ○ Explore Session(s) follow the <i>Try-Discuss-Connect Routine</i> and draw on students' prior knowledge and make connections to new concepts. ○ Develop Session(s) develop strategies and understanding through problem solving and discourse. 	<p>Number of groups to meet with each day: two</p> <p>When planning for differentiation, it is important to first think about what each student needs. You may have different focuses for different groups of students. Below are suggestions to consider when planning for small group differentiated instruction.</p> <p>Gifted Students: When planning for students who are gifted, consider differentiating the content, process or product.</p> <p>Tier I Remedial Groups: When planning for remedial work (additional work on grade level concepts), identify your Essential Understandings, Objectives, Standards, skills being taught, and Learner Outcomes, then, anticipate the</p>	<p>Activities should be aligned to specific skills & standards addressed during whole group instruction and practice of fluency standards.</p>

○ **Refine Session(s)** are when students work independently with a partner, while the teacher monitors performance and differentiates instruction.

● **Math in Action Lessons (Grades 2-6)** - Feature open-ended problems with many points of entry and more than one possible solution. In Math in Action Lessons students apply strategies and build procedural fluency.

Try - Discuss - Connect Routine is primarily used in Explore and Develop Sessions in Ready Math. Each Step in this routine will have expected Language Routines, Teacher Moves and Conversation Tips. *Language Routines* are predictable, repeatable formats that help students process word problems and communicate their growing understanding. *Teacher Moves* are powerful facilitation techniques to guide conversations in which students talk with each other rather than responding to the teacher. *Conversation Tips* are specific hints that show students what it means to engage in academic discourse. The six tips show students what it means to participate in academic discourse: listening attentively, explaining ideas, justifying, building on the ideas of others, disagreeing respectfully and making connections.

● **Try It** - The teacher displays the *Start* question to draw on prior knowledge to the day's session. The teacher guides students in making sense of the problem, and to slow down to recognize and understand important information in the problem before beginning to solve. Teacher displays the problem and uses:

- *Language Routines* - Three Reads, Co-Crafted Questions, Notice/Wonder and Say It Another Way
- *Teacher Moves* - Turn & Talk and Individual Think Time (*Typically 10 seconds to 2 minutes*)

Students apply what they have learned while making sense of the problem to represent the situation using a Part-Part-Whole model and begin solving.

most common unique needs and common misconceptions.

Doing this will help you to plan effectively, and form groups based on daily exit tickets and Ready Unit Prerequisite Report. Support students using scaffolding and/or additional practice for grade level concepts and skills.

Tier II or Tier III Remedial

Groups: When planning your grade level instruction for students that are in Tier II or Tier III considerations of each individual students' Math Intervention Plan need to be taken. Interventions and number sense relationships should be leveraged to support students with grade level content (bridging foundational concepts to support students' work at grade level content). Resources should be aligned to core content instructional resources (ie, Tools for Instruction, Fluency Skills & Practice pages, Prerequisite Lessons, Reteach Activities, Vocabulary pages, etc.), while a

- **Discuss It** - Students work in pairs to share their thinking - even incomplete thinking. Students should analyze their representations and strategies while using sentence frames when appropriate. The teacher strategically selects and sequences students' representations and strategies based upon the learning goal of the lesson. While circulating the teacher should use:
 - *Language Routines* - Compare & Contrast and Collect & Display
 - *Teacher Moves* - Turn & Talk, Individual Think Time and Four Rs (*Repeat, Reword, Rephrase, Record*)
 Selected students present and explain their solution methods and listen to critiques of others. The teacher facilitates the discussion and the class looks at highlighted strategies in the *Picture It* and *Model It* sections.
- **Connect It** - The teacher and students connect representations and strategies using a combination of individual work time and partner and whole-class discourse. Carefully selected questions lead students to recognize important mathematical ideas that were initially presented in the **Try It** problem. The teacher should use:
 - *Language Routines* - Collect & Display and Compare & Connect
 - *Teacher Moves* - Turn & Talk, Individual Think Time and Four Rs

Closing: (2-5 minutes daily)

The closure should be directly related to the goal of the lesson. Formal closure to lessons may consist of synthesizing information learned during the lesson that relates to the objective. For example, students could share with the class something new that they learned that day (the question should be detailed and related to the goal/objective), complete an exit ticket (related to the goal/objective), reflect on what challenged them (related to the goal/objective), etc.

direct explicit connection between intervention strategies and grade level content is built.

Unit Resources

<ul style="list-style-type: none"> ● Suggested Pacing Guide ● Ready Unit Flow and Progression Video ● Ready Math Background: Models, Progressions, and Teaching Tips ● Ready Interactive Tutorials ● Ready Unit Self Reflection ● Ready Unit Review ● Ready Discourse Cards/Cube ● Ready Digital Math Tools ● Silent Hand Signals ● Georgia Frameworks (K-5) ● Howard County, MD: <ul style="list-style-type: none"> ○ Gr 4 ● Achieve the Core Coherence Map ● Illustrative Mathematics ● Mindset Mathematics (Gr 3-6) by Jo Boaler ● You Cubed ● San Francisco Unified School District (SFUSD) <ul style="list-style-type: none"> ○ Gr 4 ● Three Act Tasks: <ul style="list-style-type: none"> ○ Ms. Castillo's Math (K-5) ○ Graham Fletcher (K-6) ○ Robert Kaplinsky (K-6) ○ Jon Orr (Gr 3-6) ○ Kyle Pearce (Gr 3-6) ● Sense Making Routines: <ul style="list-style-type: none"> ○ Subitizing Slides (Steve Wyborney) ○ Estimation 180 (Andrew Stadel) ○ Esti-Mysteries (Steve Wyborney) ○ Even More Esti-Mysteries (Steve Wyborney) 	<ul style="list-style-type: none"> ● Scheduling Small Groups and Rotations ● CFAs ● RCM Fluency Practice Pages ● RCM Prerequisite Lessons ● RCM Tools for Instruction Lessons ● RCM Discourse Bookmarks ● K-5 Math Teaching Resources (no direct links to free documents!) ● Virtual Manipulatives: <ul style="list-style-type: none"> ○ K6-ThinkCentral - counters, base ten blocks, number line, 100s chart, graphs, fractions, measurement ○ TheMathLearningCenter - ten frames, counters, time, number line, math rack, geoboards ○ Glencoe WorkMats/Storyboards/Manip. ○ SplatSquare-InteractiveHundredsChart ○ EduPlace - NumberLine - allows for multiple jumps to introduce open number 	<ul style="list-style-type: none"> ● Scheduling Small Groups and Rotations ● RCM Unit Game ● RCM Literacy Connections Activities ● RCM Discourse Bookmarks ● K-5 Math Teaching Resources (no direct links to free documents!) ● Howard County, MD: <ul style="list-style-type: none"> ○ Gr 4
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<ul style="list-style-type: none"> ○ Estimation Clipboard (Steve Wyborney) ○ Which One Doesn't Belong (Christopher Danielson) ○ Math Visuals (Berkley Everett) ○ Would You Rather...? (John Stevens) ○ Numberless Word Problems (Brian Bushart) ○ Number Talk Images (Tracey Zager & Pierre Tranche) ○ Daily Routines to Jumpstart Math Class (Curriculum Shared Drive) ○ Clothesline Math (Dan Kaufmann) ○ Math Spy (Dan Kaufmann) ○ Same or Different (Brian Bushart) ○ Same But Different (Sue Looney) ○ Splat (Steve Wyborney) ○ Open Middle (Robert Kaplinsky) ● Nearpod/Edpuzzles (UNIT 5) 	<p>line concept, decomposing numbers</p> <ul style="list-style-type: none"> ○ virtual Rekenrek ○ Dreambox Teacher Tools 	
Assessments		
<ul style="list-style-type: none"> ● Ready Unit Assessments ● Ready Lesson Quizzes ● Ready - Math In Action ● CFAs ● Exit Tickets 	<ul style="list-style-type: none"> ● Daily log of small group instruction ● Anecdotal Notes ● Grade Level Math Interview ● CFAs ● RCM Fluency Practice Pages ● RCM Prerequisite Lessons ● RCM Tools for Instruction Lessons ● Exit Tickets ● Achieve the Core Coherence Map 	<p>Examples of accountability measures: Recording sheets, Fluency Practice Pages, exit tickets, rubrics, reflections, etc.</p>

Standards

4.M.B.4ab Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement:

- a. An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through $1/360$ of a circle is called a “one-degree angle,” and can be used to measure angles.
- b. An angle that turns through n one-degree angles is said to have an angle measure of n degrees.

4.M.B.5 Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.

4.M.B.6 Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure.

4.G.A.1 Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.

4.G.A.2 Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.

4.G.A.3 Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.

In addition to Whole Group Standards, you may choose to focus on grade level fluency standards or other priority standards listed below:

****Unit 4 Center Focuses:**

- 4.NBT.B.4** With accuracy and efficiency add and subtract multi-digit whole numbers using the standard algorithm.
- 4.NF.B.3** Understand a fraction a/b with $a > 1$ as a sum of fractions $1/b$.
- 4.NF.C.5** Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100.
- 4.NF.C.6** Use decimal notation for fractions with denominators 10 or 100.

Unit 5 Pacing Guide

Topic: Points, Lines, Rays, and Angles		
Student Learning Standard(s):	4.G.A.1 4.M.B.4ab	- Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures. - Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint
Math Practices:	<ul style="list-style-type: none"> • MP.1 Make sense of the problem and persevere in solving them. • MP.2 Reason abstractly and quantitatively. • MP.3 Construct viable arguments and critique the reasoning of others. • MP.4 Model with Mathematics. • MP.5 Use appropriate tools strategically. • MP.6 Attend to precision. 	
Days: 5 3/24 - 3/28	Focus: (Additional Content)	Benchmarked Standard: N Fluency Standard: N
Critical Knowledge & Skills		
Objective:	We are learning to: Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures. Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint <i>Session 1-5:</i> <ul style="list-style-type: none"> • Identify and draw points, lines, line segments, rays, and angles and identify them in two-dimensional figures. • Recognize an angle as a geometric shape. • Identify acute, right, and obtuse angles in two-dimensional figures. • Identify and draw parallel and perpendicular lines, distinguish between the two, and identify them in two-dimensional figures. 	
Essential Question(s):	How do mathematical models/representations shape our understanding of mathematics?;	
Core Resources		
Core Whole Group Resources	Core Formative Assessment	

<p>Ready Classroom Math Lessons Lesson 30 Points, Lines, Rays, and Angles Nearpod; L30:S1; L30:S2; L30:S3; L30:S4; L30:S5 EdPuzzle; Lesson 30 Practice</p>	<p>-RCM Lesson Quizzes -CFAs</p>	
Additional Leveled Resources		
Activities and Additional Resources for Whole Group	Differentiated Independent Activities/Center Ideas	Teacher Table Differentiated Resources
<p>-Anchor Chart Links -Number Sense Lessons/Resources <u>Cache County:</u> - 4.G.1 Traveling with Angles - 4.G.1 Angle Animals - 4.G.1 Geometry Biomes - 4.M.B.4ab Baseball <u>Georgia Framework:</u> - 4.G.1 What Makes a Shape? - 4.G.1 Angle Shape Sort - 4.G.1 Be an Expert! - 4.M.B.4ab Guess My Angle! <u>PBS Media:</u> - Are You a Square? <u>Other Resources:</u> - Online Manipulatives on Mathigon -Interactive Tools - Virtual Geoboard</p>	<p>-iReady Individual Path -iReady Teacher Assigned Lessons -RCM Interactive Practice: None -RCM Center Activities -RCM Enrichment Activities -Center Activities (4.G.1 & 4.M.B.4ab) - 4.G.1 Geometry - 4.G.1 Between the Lines - 4.G.1 Figure Riddle - 4.M.B.4ab Cover It Up - 4.M.B.4ab The Shape of Things - 4.M.B.4ab Angle Hunters - 4.M.B.4ab Measuring Angles Activities - 4.M.B.4ab My Name Is Worth <u>Cache County:</u> - 4.G.1 Traveling with Angles - 4.G.1 Angle Animals - 4.G.1 Geometry Biomes - 4.M.B.4ab Baseball <u>Georgia Framework:</u> - 4.G.1 What Makes a Shape? - 4.G.1 Angle Shape Sort - 4.G.1 Be an Expert! - 4.M.B.4ab Guess My Angle!</p>	<p>-RCM Prerequisite Lessons - Grade 3 - Lesson 30 -RCM Tools for Instruction -RCM Exit Tickets</p>

Howard County, MD:

- [4.G.1 Copy My Angle](#)
- [4.G.1 Geoboard Angles](#)
- [4.G.1 Geoboard ABCs](#)
- [4.G.1 Line Segments on Geoboards](#)
- [4.G.1 Eye Exam](#)
- [4.M.B.4ab Circle Geoboard Angles](#)
- [4.M.B.4ab Ava and Kay](#)
- [4.M.B.4ab Angle Time](#)
- [4.M.B.4ab Letter and Angles](#)
- [4.M.B.4ab Dividing Circles into Angles](#)

Illustrative Math:

- [4.G.1 The Geometry of Letters](#)
- [4.G.1 What's The Point?](#)

Inside Mathematics:

- [4.G.1 Between the Lines](#)
- [4.G.1 Lyle's Triangles](#)
- [4.G.1 Once Upon a Time](#)
- [4.G.1 Quilt Making](#)
- [4.M.B.4ab Piece it Together](#)
- [4.M.B.4ab The Shape of Things](#)

K-5 Math Teaching Resources:

- [4.G.1 Alphabet Lines](#)
- [4.G.1 Angles on the Geoboard](#)
- [4.M.B.4ab Angles in Circles](#)

Learnzillion:

- [4.G.1 Draw points, lines, and line segments](#)
- [4.G.1 Label and name points, lines, rays, and angles using math notation](#)
- [4.G.1 Identify points, lines, line segments, and rays](#)
- [4.G.1 Classify and draw various types of angles](#)
- [4.M.B.4ab Discover angle measurement by using circles](#)

Vocabulary for Students

Mentor Text List

- Acute Angle
- Angle
- Line
- Line Segment
- Obtuse Angle
- Parallel Lines
- Perpendicular Lines
- Point
- Ray
- Right Angle
- Vertex

These vocabulary words are part of the [UNIT 5 Word Wall](#)

- *Shape Up!: Fun with Triangles and Other Polygons* by David A. Adler
- *The Shape of Things* by Dayle Dodds
- *The Greedy Triangle* by Marilyn Burns
- *When a Line Bends, A Shape Begins* by Rhonda Greene
- *Circle* by Robin Nelson
- *Circles, Triangles, and Squares* by Tana Hoban

Topic: Angles		
Student Learning Standard(s):	<p>4.M.B.4ab</p> <p>4.M.B.5</p>	<p>- Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement:</p> <p>A. An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through $1/360$ of a circle is called a “one-degree angle,” and can be used to measure angles.</p> <p>B. An angle that turns through n one-degree angles is said to have an angle measure of n degrees.</p> <p>- Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.</p>
Math Practices:	<ul style="list-style-type: none"> • MP.1 Make sense of the problem and persevere in solving them. • MP.2 Reason abstractly and quantitatively. • MP.3 Construct viable arguments and critique the reasoning of others. • MP.4 Model with Mathematics. • MP.5 Use appropriate tools strategically. • MP.6 Attend to precision. • MP.7 Look for and make use of structure. 	
Days: 4 3/31 - 4/3	Focus: (Additional Content)	Benchmarked Standard: N Fluency Standard: N
Critical Knowledge & Skills		
Objective:	<p>We are learning to: Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement:</p> <p>A. An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through $1/360$ of a circle is called a “one-degree angle,” and can be used to measure angles.</p> <p>B. An angle that turns through n one-degree angles is said to have an angle measure of n degrees.</p> <p>- Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.</p> <p><i>Session 1-4:</i></p> <ul style="list-style-type: none"> • Recognize the relationship between the measure of an angle and the part of a circle that the angle turns through. • Use a protractor to measure an angle. • Use benchmark angle measures to estimate the measure of an angle. 	

	<ul style="list-style-type: none"> • Draw an angle of a specific degree.
Essential Question(s):	How do mathematical models/representations shape our understanding of mathematics?; How does what you're measuring determine how you measure it?

Core Resources	
Core Whole Group Resources	Core Formative Assessment
Ready Classroom Math Lessons Lesson 31 Angles Nearpod; L31:S1 ; L31:S2 ; L31:S3 ; L31:S4 EdPuzzle; Lesson 31 Practice	-RCM Lesson Quizzes -CFAs

Additional Leveled Resources		
Activities and Additional Resources for Whole Group	Differentiated Independent Activities/Center Ideas	Teacher Table Differentiated Resources
-Anchor Chart Links -Number Sense Lessons/Resources <u>Cache County:</u> - 4.M.B.4ab Baseball - 4.M.B.5 Pie Party - 4.M.B.5 Pie Pieces <u>Georgia Framework:</u> - 4.M.B.4ab Guess My Angle! - 4.M.B.5 Turn, Turn, Turn <u>Graham Fletcher:</u> - 4.M.B.5 For The Win 3-ACT Task PBS Media: - Are You a Square? <u>Other Resources:</u> - Online Manipulatives on Mathigon	-iReady Teacher Assigned Lessons -RCM Interactive Practice: Angles -RCM Center Activities -RCM Enrichment Activities -Center Activities (4.M.B.4ab & 4.M.B.5) - 4.M.B.4ab Cover It Up - 4.M.B.4ab The Shape of Things - 4.M.B.4ab Angle Hunters - 4.M.B.4ab Measuring Angles Activities - 4.M.B.4ab My Name Is Worth - 4.M.B.5 Angle Measuring - 4.M.B.5 Polygon Angles - 4.M.B.5 Drawing, Estimating, and Measuring Angles - 4.M.B.5 Exploring Right Triangles - 4.M.B.5 Exploring Quadrilaterals	-RCM Prerequisite Lessons - Grade 3 - Lesson 30 -RCM Tools for Instruction - RCM Exit Tickets

-Interactive Tools
- [Interactive Angles](#)

Cache County:

- [4.M.B.4ab Baseball](#)
- [4.M.B.5 Pie Party](#)
- [4.M.B.5 Pie Pieces](#)

Georgia Framework:

- [4.M.B.4ab Guess My Angle!](#)
- [4.M.B.5 Turn, Turn, Turn](#)

Graham Fletcher:

- [4.M.B.5 For The Win 3-ACT Task](#)

Howard County, MD:

- [4.M.B.4ab Circle Geoboard Angles](#)
- [4.M.B.4ab Ava and Kay](#)
- [4.M.B.4ab Angle Time](#)
- [4.M.B.4ab Letter and Angles](#)
- [4.M.B.4ab Dividing Circles into Angles](#)
- [4.M.B.5 Measuring Angles](#)

Illustrative Math:

- [4.M.B.5 Measuring Angles](#)

Inside Mathematics:

- [4.M.B.4ab & 4.M.B.5 Piece it Together](#)
- [4.M.B.4ab The Shape of Things](#)

K-5 Math Teaching Resources:

- [4.M.B.4ab Angles in Circles](#)
- [4.M.B.5 Angle Barrier Game](#)
- [4.M.B.5 How Many Degrees?](#)

Learnzillion:

- [4.M.B.4ab Discover angle measurement by using circles](#)
- [4.M.B.4ab Identify angles using angle characteristics](#)
- [4.M.B.4ab Measure full and half rotations](#)
- [4.M.B.5 Introduction to protractors](#)
- [4.M.B.5 Measure angles to the nearest degree with protractors](#)

Vocabulary for Students

Mentor Text List

- Acute Angle
- Angle
- Degree (°)
- Obtuse Angle
- Protractor
- Ray
- Right Angle
- Vertex

These vocabulary words are part of the [UNIT 5 Word Wall](#)

- *Shape Up!: Fun with Triangles and Other Polygons* by David A. Adler
- *The Shape of Things* by Dayle Dodds
- *The Greedy Triangle* by Marilyn Burns
- *When a Line Bends, A Shape Begins* by Rhonda Greene
- *Circle* by Robin Nelson
- *Circles, Triangles, and Squares* by Tana Hoban

Topic: Add and Subtract Angles		
Student Learning Standard(s):	4.M.B.6	- Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure.
Math Practices:	<ul style="list-style-type: none"> • MP.1 Make sense of the problem and persevere in solving them. • MP.2 Reason abstractly and quantitatively. • MP.3 Construct viable arguments and critique the reasoning of others. • MP.4 Model with Mathematics. • MP.5 Use appropriate tools strategically. • MP.6 Attend to precision. • MP.7 Look for and make use of structure. 	
Days: 4 4/4 - 4/9	Focus: (Additional Content)	Benchmarked Standard: N Fluency Standard: N
Critical Knowledge & Skills		
Objective:	<p>We are learning to: Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure.</p> <p><i>Session 1-4:</i></p> <ul style="list-style-type: none"> • Recognize that an angle can be decomposed into several smaller angles. • Recognize that several smaller angles can be combined to form a larger angle. • Add and Subtract to find angle measures. • Use addition and subtraction to solve word problems about angle measures. 	
Essential Question(s):	How does my knowledge of basic operations help me solve problems?	

Core Resources	
Core Whole Group Resources	Core Formative Assessment

<p>Ready Classroom Math Lessons Lesson 32 Add and Subtract with Angles Nearpod; L32:S1; L32:S2; L32:S3; L32:S4 EdPuzzle; Lesson 32 Practice</p>	<p>-RCM Lesson Quizzes -CFAs</p>	
Additional Levelled Resources		
Activities and Additional Resources for Whole Group	Differentiated Independent Activities/Center Ideas	Teacher Table Differentiated Resources
<p>-Anchor Chart Links -Number Sense Lessons/Resources <u>Cache County:</u> - 4.M.B.6 Pie Party - 4.M.B.6 Pie Pieces <u>Georgia Framework:</u> - 4.M.B.6 Summing It Up - 4.M.B.6 Angles of Set Squares <u>Graham Fletcher:</u> - 4.M.B.6 For The Win 3-ACT Task <u>Other Resources:</u> - Online Manipulatives on Mathigon -Interactive Tools</p>	<p>-iReady Individual Path -RCM Center Activities -RCM Enrichment Activities -Center Activities (4.M.B.6) <u>Cache County:</u> - 4.M.B.6 Pie Party - 4.M.B.6 Pie Pieces <u>Georgia Framework:</u> - 4.M.B.6 Summing It Up - 4.M.B.6 Angles of Set Squares <u>Graham Fletcher:</u> - 4.M.B.6 For The Win 3-ACT Task <u>Howard County, MD:</u> - 4.M.B.6 Angle Estimation Competition - 4.M.B.6 Detectives Determining Angles - 4.M.B.6 Window Design <u>Illustrative Math:</u> - 4.M.B.6 Finding an Unknown Angle - 4.M.B.6 Measuring Angles <u>K-5 Math Teaching Resources:</u> - 4.M.B.6 Angle Measures (v. 1-3) <u>Learnzillion:</u> - 4.M.B.6 Compose and decompose angles</p>	<p>-RCM Prerequisite Lessons - Grade 3 - Lesson 30 -RCM Tools for Instruction -RCM Exit Tickets</p>

Vocabulary for Students	Mentor Text List
<ul style="list-style-type: none">- Angle- Degree (°)- Protractor <p>These vocabulary words are part of the UNIT 5 Word Wall</p>	<ul style="list-style-type: none">- <i>Shape Up!: Fun with Triangles and Other Polygons</i> by David A. Adler- <i>The Shape of Things</i> by Dayle Dodds- <i>The Greedy Triangle</i> by Marilyn Burns- <i>When a Line Bends, A Shape Begins</i> by Rhonda Greene- <i>Circle</i> by Robin Nelson- <i>Circles, Triangles, and Squares</i> by Tana Hoban

Topic: Classify Two-Dimensional Figures		
Student Learning Standard(s):	4.G.A.2	- Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.
Math Practices:	<ul style="list-style-type: none"> • MP.1 Make sense of the problem and persevere in solving them. • MP.2 Reason abstractly and quantitatively. • MP.3 Construct viable arguments and critique the reasoning of others. • MP.4 Model with Mathematics. • MP.5 Use appropriate tools strategically. • MP.6 Attend to precision. • MP.7 Look for and make use of structure. • MP.8 Look for and express regularity in repeated reasoning. 	
Days: 5 4/10 - 4/16	Focus: (Additional Content)	Benchmarked Standard: N Fluency Standard: N
Critical Knowledge & Skills		
Objective:	<p>We are learning to: Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.</p> <p><i>Session 1-5:</i></p> <ul style="list-style-type: none"> • Sort two-dimensional figures based on parallel or perpendicular sides and on acute, obtuse, or right angles. • Recognize that triangles can be classified based on the lengths of their sides (isosceles, equilateral, scalene). • Name a triangle based on the kind of angles it has (acute, obtuse, right). 	
Essential Question(s):	How does sorting objects help us shape our understanding of mathematics?	

Core Resources	
Core Whole Group Resources	Core Formative Assessment
Ready Classroom Math Lessons Lesson 33 Classify Two-Dimensional Figures Nearpod; L33:S1 ; L33:S2 ; L33:S3 ; L33:S4 ; L33:S5	-RCM Lesson Quizzes -CFAs

EdPuzzle; Lesson 33 Practice

Additional Levelled Resources

Activities and Additional Resources for Whole Group

Differentiated Independent Activities/Center Ideas

Teacher Table Differentiated Resources

- Anchor Chart Links
- Number Sense Lessons/Resources
 - Cache County:
 - [4.G.2 Quilting Blocks](#)
 - [4.G.2 Dream Room Task](#)
 - [4.G.2 House That You Built](#)
 - [4.G.2 Right Angles](#)
 - [4.G.2 Classify 2-D Shapes](#)
 - [4.G.2 Naughty Puppy](#)
 - Georgia Framework:
 - [4.G.2 Quadrilateral Roundup](#)
 - [4.G.2 Thoughts About Triangles](#)
 - [4.G.2 Geometry Town](#)
 - PBS Media:
 - [Triangle Yoga](#)
 - [Are You a Square?](#)
 - Other Resources:
 - [Online Manipulatives on Mathigon](#)
- Interactive Tools
 - [Classify Triangles and Quadrilaterals](#)
 - [Interactive Tangrams](#)
 - [Virtual Geoboard](#)

- iReady Individual Path
- RCM Center Activities
- RCM Enrichment Activities
- Center Activities (4.G.2)
 - [4.G.2 Quilt Making](#)
 - [4.G.2 The Polygon Song](#)
 - [Music File](#)
 - Cache County:
 - [4.G.2 Quilting Blocks](#)
 - [4.G.2 Dream Room Task](#)
 - [4.G.2 House That You Built](#)
 - [4.G.2 Right Angles](#)
 - [4.G.2 Classify 2-D Shapes](#)
 - [4.G.2 Naughty Puppy](#)
 - Georgia Framework:
 - [4.G.2 Quadrilateral Roundup](#)
 - [4.G.2 Thoughts About Triangles](#)
 - [4.G.2 Geometry Town](#)
 - Howard County, MD:
 - [4.G.2 Obtuse Angles Abound](#)
 - [4.G.2 Is It Isosceles?](#)
 - [4.G.2 Is It Right?](#)
 - [4.G.2 Measuring Triangles](#)
 - [4.G.2 Quadrilateral Construction](#)
 - [4.G.2 Shape Sorting](#)
 - [4.G.2 Splitting Triangles](#)
 - [4.G.2 Triangles All Around](#)

- RCM Prerequisite Lessons
 - Grade 3
 - Lesson 30
 - Lesson 31
- RCM Tools for Instruction
- [RCM Exit Tickets](#)

	<p><u>Illustrative Math:</u></p> <ul style="list-style-type: none"> - 4.G.2 Are these right? - 4.G.2 What shape am I? - 4.G.2 Defining Attributes of Rectangles and Parallelograms - 4.G.2 What is a Trapezoid? (Part 1) <p><u>Inside Mathematics:</u></p> <ul style="list-style-type: none"> - 4.G.2 Quilt Making <p><u>K-5 Math Teaching Resources:</u></p> <ul style="list-style-type: none"> - 4.G.2 Quadrilateral Criteria - 4.G.2 Right Triangles on the Geoboard <p><u>Learnzillion:</u></p> <ul style="list-style-type: none"> - 4.G.2 Classify two-dimensional figures by examining their properties - 4.G.2 Classify triangles by examining their properties 	
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Vocabulary for Students	Mentor Text List
<ul style="list-style-type: none"> - Acute Triangle - Equilateral Triangle - Hexagon - Isosceles Triangle - Obtuse Triangle - Parallel Lines - Parallelogram - Perpendicular Lines - Polygon - Rhombus - Right Triangle - Scalene Triangle - Trapezoid (Exclusive) - Trapezoid (Inclusive) - Triangle <p>These vocabulary words are part of the UNIT 5 Word Wall</p>	<ul style="list-style-type: none"> - <i>Shape Up!: Fun with Triangles and Other Polygons</i> by David A. Adler - <i>The Shape of Things</i> by Dayle Dodds - <i>The Greedy Triangle</i> by Marilyn Burns - <i>When a Line Bends, A Shape Begins</i> by Rhonda Greene - <i>Circles, Triangles, and Squares</i> by Tana Hoban

Topic: Symmetry		
Student Learning Standard(s):	4.G.A.3	- Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.
Math Practices:	<ul style="list-style-type: none"> • MP.1 Make sense of the problem and persevere in solving them. • MP.2 Reason abstractly and quantitatively. • MP.3 Construct viable arguments and critique the reasoning of others. • MP.4 Model with Mathematics. • MP.5 Use appropriate tools strategically. • MP.6 Attend to precision. • MP.7 Look for and make use of structure. 	
Days: 3 4/29 - 5/1	Focus: (Additional Content)	Benchmarked Standard: N Fluency Standard: N
Critical Knowledge & Skills		
Objective:	<p>We are learning to: Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.</p> <p><i>Session 1-3:</i></p> <ul style="list-style-type: none"> • Recognize lines of symmetry in two-dimensional figures. • Draw lines of symmetry in two-dimensional figures. 	
Essential Question(s):	How does sorting objects help us shape our understanding of mathematics?	

Core Resources	
Core Whole Group Resources	Core Formative Assessment
<p>Ready Classroom Math Lessons Lesson 34 Symmetry Nearpod; L34:S1; L34:S2; L34:S3 EdPuzzle; Lesson 34 Practice</p>	<p>-RCM Lesson Quizzes -CFAs</p>

Additional Levelled Resources

Activities and Additional Resources for Whole Group	Differentiated Independent Activities/Center Ideas	Teacher Table Differentiated Resources
<p>-Anchor Chart Links</p> <p>-Number Sense Lessons/Resources</p> <p style="padding-left: 20px;"><u>Cache County:</u></p> <p style="padding-left: 40px;">- 4.G.3 The House that You Built</p> <p style="padding-left: 20px;"><u>Georgia Framework:</u></p> <p style="padding-left: 40px;">- 4.G.3 Super Hero Symmetry</p> <p style="padding-left: 40px;">- 4.G.3 Line Symmetry</p> <p style="padding-left: 40px;">- 4.G.3 Quilt of Symmetry</p> <p style="padding-left: 40px;">- 4.G.3 Decoding ABC Symmetry</p> <p style="padding-left: 20px;"><u>Other Resources:</u></p> <p style="padding-left: 40px;">- Online Manipulatives on Mathigon</p> <p>-Interactive Tools</p> <p style="padding-left: 20px;">- Virtual Geoboard</p>	<p>-iReady Individual Path</p> <p>-iReady Teacher Assigned Lessons</p> <p>-RCM Interactive Practice: None</p> <p>-RCM Center Activities</p> <p>-RCM Enrichment Activities</p> <p>-Center Activities (4.G.3)</p> <p style="padding-left: 20px;"><u>Cache County:</u></p> <p style="padding-left: 40px;">- 4.G.3 The House that You Built</p> <p style="padding-left: 20px;"><u>Georgia Framework:</u></p> <p style="padding-left: 40px;">- 4.G.3 Super Hero Symmetry</p> <p style="padding-left: 40px;">- 4.G.3 Line Symmetry</p> <p style="padding-left: 40px;">- 4.G.3 Quilt of Symmetry</p> <p style="padding-left: 40px;">- 4.G.3 Decoding ABC Symmetry</p> <p style="padding-left: 20px;"><u>Howard County, MD:</u></p> <p style="padding-left: 40px;">- 4.G.3 Colorful Designs</p> <p style="padding-left: 40px;">- 4.G.3 Finding Symmetry with Polygons</p> <p style="padding-left: 40px;">- 4.G.3 Symmetry: Mirror Your Partner</p> <p style="padding-left: 40px;">- 4.G.3 Geoboard Symmetry</p> <p style="padding-left: 40px;">- 4.G.3 Mirror Image</p> <p style="padding-left: 40px;">- 4.G.3 Symmetry with Color Tiles</p> <p style="padding-left: 20px;"><u>Inside Mathematics:</u></p> <p style="padding-left: 40px;">- 4.G.3 Cut It Out</p> <p style="padding-left: 40px;">- 4.G.3 Part and Whole</p> <p style="padding-left: 40px;">- 4.G.3 The Shape of Things</p> <p style="padding-left: 40px;">- 4.G.3 Fair Play</p> <p style="padding-left: 40px;">- 4.G.3 Symmetrical Patterns</p> <p style="padding-left: 20px;"><u>K-5 Math Teaching Resources:</u></p> <p style="padding-left: 40px;">- 4.G.3 Symmetry in Regular Polygons</p> <p style="padding-left: 40px;">- 4.G.3 Symmetrical Designs</p>	<p>-RCM Prerequisite Lessons</p> <p style="padding-left: 40px;">- Grade 3</p> <p style="padding-left: 80px;">- Lesson 30</p> <p style="padding-left: 80px;">- Lesson 33</p> <p>-RCM Tools for Instruction</p> <p>-RCM Exit Tickets</p> <p><u>Illustrative Math:</u></p> <p style="padding-left: 40px;">- 4.G.3 Lines of symmetry for triangles</p> <p style="padding-left: 40px;">- 4.G.3 Lines of symmetry for quadrilaterals</p> <p style="padding-left: 40px;">- 4.G.3 Lines of symmetry for circles</p> <p style="padding-left: 40px;">- 4.G.3 Finding Lines of Symmetry</p>

	<p><u>Learnzillion:</u> - 4.G.3 Identify line symmetry in regular polygons</p>	
<p style="text-align: center;">Vocabulary for Students</p>	<p style="text-align: center;">Mentor Text List</p>	
<p>- Line of symmetry These vocabulary words are part of the UNIT 5 Word Wall</p>	<p>- <i>Seeing Symmetry</i> by Loreen Leedy - <i>Reflections</i> by Ann Jonas</p>	

**Math In Action Lessons can be completed if time allows within the unit. They may also be used for differentiation for G&T students.*

Topic: Math in Action: Classify Shapes and Angles		
Student Learning Standard(s):	<p>4.G.A.1</p> <p>4.G.A.2</p> <p>4.G.A.3</p> <p>4.M.B.4ab</p> <p>4.M.B.5</p> <p>4.M.B.6</p>	<p>Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.</p> <p>Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.</p> <p>Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.</p> <p>Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement:</p> <p style="padding-left: 20px;">a. An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through $\frac{1}{360}$ of a circle is called a “one-degree angle,” and can be used to measure angles.</p> <p style="padding-left: 20px;">b. An angle that turns through n one-degree angles is said to have an angle measure of n degrees.</p> <p>Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.</p> <p>Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure.</p>
Math Practices:	<ul style="list-style-type: none"> • MP.1 Make sense of the problem and persevere in solving them. • MP.2 Reason abstractly and quantitatively. • MP.3 Construct viable arguments and critique the reasoning of others. • MP.4 Model with Mathematics. • MP.5 Use appropriate tools strategically. • MP.6 Attend to precision. • MP.8 Look for and express regularity in repeated reasoning. 	
Days:	Focus: (Additional Content)	Benchmarked Standard: N Fluency Standard: N

Critical Knowledge & Skills

Objective:	We are learning to: Apply multiple skills from the unit to solve real-world problems related to mosaic art. Problems involve classifying shapes, identifying and drawing a line of symmetry, drawing a shape with given properties, and adding angle measures.
Essential Question(s):	How do mathematical models/representations shape our understanding of mathematics?; How does sorting objects help us shape our understanding of mathematics?; How does sorting objects help us shape our understanding of mathematics?; How do mathematical models/representations shape our understanding of mathematics?; How does what you're measuring determine how you measure it?; How does my knowledge of basic operations help me solve problems?

Core Resources

Core Whole Group Resources	Core Formative Assessment
Ready Classroom Math Lessons Math In Action Classify Shapes and Angles	-RCM Lesson Quizzes -CFAs

Additional Levelled Resources

Activities and Additional Resources for Whole Group	Differentiated Independent Activities/Center Ideas	Teacher Table Differentiated Resources
-Anchor Chart Links -Number Sense Lessons/Resources -Interactive Tools	-iReady Individual Path -iReady Teacher Assigned Lessons -RCM Interactive Practice: N/A -RCM Center Activities -RCM Enrichment Activities	-RCM Prerequisite Lessons -RCM Tools for Instruction - Extra Support Activity - Challenge Activity

Computer Science (8.1) and Design Thinking (8.2)

<p>8.1.5.CS.3: Identify potential solutions for simple hardware and software problems using common troubleshooting strategies.</p> <p>8.1.5.NI.1: Develop models that successfully transmit and receive information using both wired and wireless methods</p> <p>8.1.5.NI.2: Describe physical and digital security measures for protecting sensitive personal information.</p> <p>8.1.5.IC.1: Identify computing technologies that have impacted how individuals live and work and describe the factors that influenced the changes.</p> <p>8.1.5.IC.2: Identify possible ways to improve the accessibility and usability of computing technologies to address the diverse needs and wants of users.</p> <p>8.1.5.DA.1: Collect, organize, and display data in order to highlight relationships or support a claim.</p> <p>8.1.5.AP.4: Break down problems into smaller, manageable sub-problems to facilitate program development.</p>	<p>8.2.5.ITH.1: Explain how societal needs and wants influence the development and function of a product and a system.</p> <p>8.2.5.ITH.2: Evaluate how well a new tool has met its intended purpose and identify any shortcomings it might have.</p> <p>8.2.5.ITH.4: Describe a technology/tool that has made the way people live easier or has led to a new business or career.</p> <p>8.2.5.NT.1: Troubleshoot a product that has stopped working and brainstorm ideas to correct the problem.</p> <p>8.2.5.NT.2: Identify new technologies resulting from the demands, values, and interests of individuals, businesses, industries, and societies.</p> <p>8.2.5.ETW.1: Describe how resources such as material, energy, information, time, tools, people, and capital are used in products or systems.</p> <p>8.2.5.ETW.2: Describe ways that various technologies are used to reduce improper use of resources.</p> <p>8.2.5.ETW.3: Explain why human-designed systems, products, and environments need to be constantly monitored, maintained, and improved.</p> <p>8.2.5.EC.1: Analyze how technology has contributed to or reduced inequities in local and global communities and determine its short- and long-term effects.</p>
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Preparation for College, Careers, and Beyond	
Career Ready Practices	Personal Financial Literacy (9.1), Career Awareness, Exploration, and Preparation (9.2), Life Literacies and Key Skills (9.4)
<p>CRP1. Act as a responsible and contributing citizen and employee.</p> <p>CRP2. Apply appropriate academic and technical skills.</p> <p>CRP3. Attend to personal health and financial well-being.</p> <p>CRP4. Communicate clearly and effectively and with reason.</p>	<p>9.4.5.CI.1: Use appropriate communication technologies to collaborate with individuals with diverse perspectives about a local and/or global climate change issue and deliberate about possible solutions</p> <p>9.4.5.CI.2: Investigate a persistent local or global issue, such as climate change, and collaborate with individuals with diverse perspectives to improve upon current actions designed to address the issue</p>

CRP5. Consider the environmental, social and economic impacts of decisions.

CRP6. Demonstrate creativity and innovation.

CRP7. Employ valid and reliable research strategies.

CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.

CRP9. Model integrity, ethical leadership and effective management.

CRP10. Plan education and career paths aligned to personal goals.

CRP11. Use technology to enhance productivity.

CRP12. Work productively in teams while using cultural global competence.

9.4.5.CI.3: Participate in a brainstorming session with individuals with diverse perspectives to expand one's thinking about a topic of curiosity

9.4.5.CI.4: Research the development process of a product and identify the role of failure as a part of the creative process

9.4.5.CT.1: Identify and gather relevant data that will aid in the problem-solving process

9.4.5.CT.2: Identify a problem and list the types of individuals and resources (e.g., school, community agencies, governmental, online) that can aid in solving the problem

9.4.5.CT.3: Describe how digital tools and technology may be used to solve problems.

9.4.5.CT.4: Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global

9.4.5.DC.1: Explain the need for and use of copyrights.

9.4.5.DC.2: Provide attribution according to intellectual property rights guidelines using public domain or creative commons media.

9.4.5.DC.3: Distinguish between digital images that can be reused freely and those that have copyright restrictions.

9.4.5.DC.4: Model safe, legal, and ethical behavior when using online or offline technology

9.4.5.DC.5: Identify the characteristics of a positive and negative online identity and the lasting implications of online activity

9.4.5.DC.6: Compare and contrast how digital tools have changed social interactions

9.4.5.DC.7: Explain how posting and commenting in social spaces can have positive or negative consequences.

9.4.5.DC.8: Propose ways local and global communities can engage digitally to participate in and promote climate action

9.4.5.GCA.1: Analyze how culture shapes individual and community perspectives and points of view

9.4.5.IML.1: Evaluate digital sources for accuracy, perspective, credibility and relevance

9.4.5.IML.2: Create a visual representation to organize information about a problem or issue

- 9.4.5.IML.3: Represent the same data in multiple visual formats in order to tell a story about the data
- 9.4.5.IML.4: Determine the impact of implicit and explicit media messages on individuals, groups, and society as a whole.
- 9.4.5.IML.5: Distinguish how media are used by individuals, groups, and organizations for varying purposes
- 9.4.5.IML.6: Use appropriate sources of information from diverse sources, contexts, disciplines, and cultures to answer questions
- 9.4.5.IML.7: Evaluate the degree to which information meets a need including social emotional learning, academic, and social
- 9.4.5.TL.1: Compare the common uses of at least two different digital tools and identify the advantages and disadvantages of using each.
- 9.4.5.TL.2: Sort and filter data in a spreadsheet to analyze findings.
- 9.4.5.TL.3: Format a document using a word processing application to enhance text, change page formatting, and include appropriate images graphics, or symbols.
- 9.4.5.TL.4: Compare and contrast artifacts produced individually to those developed collaboratively
- 9.4.5.TL.5: Collaborate digitally to produce an artifact

Personal Financial Literacy (Standard 9.1)	
Strand A	Income and Careers
Strand B	Money Management
Strand C	Credit and Debt Management
Strand D	Planning, Saving, and Investing
Strand E	Becoming a Critical Consumer
Strand F	Civic and Financial Responsibility
Strand G	Insuring and Protecting
Career Awareness, Exploration, and Preparation (Standard 9.2)	
Strand A	Career Awareness (by end of Grade 4)
Strand B	Career Exploration (by end of Grade 8)
Strand C	Career Preparation (by end of Grade 12)

Cross-Curricular Connections	
Interdisciplinary Connections	Technology Integration and Literacy
<ul style="list-style-type: none"> Literature connections (math mentor texts identified in “Resources and Activities”) Math journals Math word wall Literacy Connections & Activities Ready Classroom Math 	<p>Online links and possible resources for the integration of technology into lessons are embedded within the “Possible Resources and Activities” column for each Topic area.</p>

Possible Modifications and Accommodations			
Special Education/504 Plans	At-Risk	Gifted	English Language Learners
<p><i>*All teachers of students with special needs must review each student’s IEP. Teachers must then select the appropriate modifications and/or accommodations necessary to enable the student to appropriately progress in the general curriculum.</i></p> <p>Possible Modifications/Accommodations</p> <ul style="list-style-type: none"> Number line on desk Extra time on timed calculation assessments Use of a calculator or chart of basic facts for computation Use of a graphic organizer to plan ways to solve math problems Use of concrete materials and objects (manipulatives) Opportunities for cooperative partner work Assign fewer problems at one time (e.g., assign only odds or evens) 	<p>The possible list of modifications/accommodations identified for Special Education students can be utilized for At-Risk students. Teachers should utilize ongoing methods to provide instruction, assess student needs, and utilize modifications specific to the needs of individual students.</p> <p><i>*Refer to the individual student Math Plan for specific interventions.</i></p>	<p><i>*Teachers should select the appropriate modifications and/or accommodations for Gifted and Talented according to the following suggestions.</i></p> <p>Differentiating instruction based on:</p> <ul style="list-style-type: none"> Content: <i>What</i> is taught or the material used Process: <i>How</i> it is taught or support given or student grouping or environment Product: What students produce <p>To differentiate content consider:</p> <ul style="list-style-type: none"> Using different resources that have less explicit information (e.g., tiering assignments - consider what would make the content more complex to digest for gifted students) <ul style="list-style-type: none"> For Example: tiering problem solving scenarios making a gifted learner’s scenario more complex For Example: gifted students could work on deriving the procedure for an abstract concept Organizing ideas through graphic organizers Using a learning contract (learning contracts are <i>individualized</i> and allow students to participate in designing their own learning which is motivating for gifted students) 	<ul style="list-style-type: none"> Continue practicing vocabulary Demonstrate that vocabulary can have multiple meanings Encourage bilingual supports among students Provide visual cues, graphic representations, gestures, and pictures Rephrase math problems when appropriate Build knowledge from real-world examples Provide manipulatives and symbols Have students estimate each other’s heights Have students measure themselves and one another Have students relate an object they know with a unit of measure

<ul style="list-style-type: none"> ● Basic computation – use counters ● Differentiated center-based small group instruction ● Fractions – use fraction blocks ● Provide a copy of mathematical equations, class notes, and examples for math notebooks ● Highlight or underline key words in word problems ● If a manipulative is used during instruction, allow its use on a test ● Place value – use place value blocks ● Provide graph paper for arrays ● Provide reteach pages if necessary ● Provide several ways to solve a problem if possible ● Offer small and large graph paper options ● Provide visual aids and anchor charts ● Tiered lessons and assignments 		<ul style="list-style-type: none"> ● Using jigsaws ● Using orbital studies (differ from independent investigations and is meant as an extension of the topics covered in class into specific fields of study e.g., manufacturing) <p>To differentiate the process consider:</p> <ul style="list-style-type: none"> ● How students are grouped ● Tiering materials used (e.g., graphic organizers varying in complexity, types of questions asked - DOK level) <ul style="list-style-type: none"> ○ For Example: <i>Below-Grade-Level Question:</i> ●●●●●● + ? = ●●●●●●●●●● <i>On-Grade-Level Question (Grade 1):</i> 6 + ? = 10 <i>Above-Grade-Level Question:</i> Jon has 6 puppies. He wants to have 10 puppies. How many more puppies does he need to buy? <p>To differentiate the product consider:</p> <ul style="list-style-type: none"> ● Using a choice board (the difficulty of the activity should be noted for each choice and should be at least 3 levels) ● Using a menu of options (each item is assigned a point value and students select the route to take) ● Using open ended tasks (have more than one correct answer and/or more than one way to get to/explain an answer) <ul style="list-style-type: none"> ○ For Example: (Grade 2) Use the digits 0 to 9, at most one time each, to make a true statement. □□ - □□ = □□ + □□ (Open Middle Link) ○ For Example: (Grade 3) Using the digits 1 to 9 exactly one time each, place a digit in each box to make the sum as close to 1000 as possible. □□□ + □□□ + □□□ (GeoGebra Link) 	<ul style="list-style-type: none"> ● Encourage peer discussions regarding how students are thinking about math ● RCM Unit Connect Language Development to Mathematics
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Individualized Learning Opportunities

Possible independent study and online learning opportunities are embedded within the “Possible Resources and Activities” column for each Topic area. iReady